
Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: Tue Oct 30 11:34:38 EDT 2007

Validated By CRFValidator v 1.0.3

Application No: 10590831 Version No: 1.0

Input Set:

Output Set:

Started: 2007-10-11 15:53:21.867 **Finished:** 2007-10-11 15:53:22.140

Elapsed: 0 hr(s) 0 min(s) 0 sec(s) 273 ms

Total Warnings: 2

Total Errors: 0

No. of SeqIDs Defined: 4

Actual SeqID Count: 4

Error code		Error Description										
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(3)	
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(4)	

SEQUENCE LISTING

<110>	Chur Lee, Kand Ju, Koh,	Corporation ng, Sung Oh Bheong-Uk g, Whan-Koo Jae-Yeong Eun Sung k, Sung-Sik r, Young-Hoo	on									
<120>	Gamr	ma-Butyrobet	taine hydoxy	ylase Origin	nated Frome	Neurospora	crassa					
<130>	HANG	DL-13074										
	10590831 2007-10-11											
		/KR05/00532 4-02-26										
<160>	4											
<170>	Pate	entIn versio	on 3.4									
<212>	1 1346 DNA Neus	6 rospora cras	ssa									
<400>	1	cadedattea	aattcaatc	ccagctccgg	ttagagaagg	agatatoggg	60					
				agagtcaaaa			120					
ctggagt	cgt	ctcttccgcc	aggtttccct	cgaagactag	actcggacct	tgtgtgggac	180					
ggcaaca	accc	tcgccgagac	gtacgactgg	acctacagac	tgacagaaga	ggccattgat	240					
gaaatco	gagg	ccgcgcttcg	tcattttaag	agttagtaca	gaatctctcc	ttcctgtcct	300					
tgggcat	caa	gccatcaact	aaccatcacc	gcatgacagg	cctcaacaag	cccctaggct	360					
acatcaa	acca	agaaaccttc	ccccttcccc	gcctacacca	cactctccgc	tccctctccc	420					
acgagct	cca	ccacggccac	ggcttcaaag	tcctccgcgg	gctccccgtc	acctcccata	480					
cacgcga	agga	aaacatcatc	atctacgccg	gcgtctcctc	gcatgtcgct	cctatccgcg	540					
gccgcca	agga	caaccagcac	aacggccacc	cageegaegt	agtcctagca	cacatcaaag	600					
acctgto	ccac	gactgtttct	gacgtgagca	aaatcggtgc	acccgcctac	accaccgaga	660					
aacaagt	ctt	ccacaccgac	gcaggcgaca	tcgtcgccct	cttttgcttg	ggagaggccg	720					

ccgagggcgg acagagttac ctgtccagca gctggaaggt gtacaacgag ctggcagcca 780

ctcggcccga t	tetggttege	acgctggcgg	agccgtgggt	ggcggacgag	tttggcaagg	840
aagggaggaa g	gttttctgtg	cgaccgcttt	tgcattttca	gtctactgct	gctgctgctt	900
ctagggaagc a	aaagcccgag	tctgaacggc	tcatcatcca	gtacgcccgc	cgcacgttta	960
cggggtattg o	gggattaccg	aggtcggcgg	atatcccgcc	cattacggag	gcgcaggcgg	1020
aggcgttgga t	tgcgctgcac	tttacggcgg	agaagtacgc	ggtggcgctg	gatttcaggc	1080
agggggatgt d	ccagtttgtg	aataacttga	gtgtgttcca	ttcgagggcg	gggtttagag	1140
atgaggggga g	gaagcagagg	catttggtta	ggttgtggtt	gagagateeg	gagaatgcgt	1200
gggagacgcc c	cgaggcgttg	aaggaacggt	gggaacgcgt	gtatggcggg	gtgagtccgg	1260
agagggaggt g	gtttccgctt	gagccgcaga	ttaggagege	gagtaagggg	gagagcgtgg	1320
ggacgcaggg t	tgggggaggg	tattga				1346

<210> 2

<211> 425

<212> PRT

<213> Neurospora crassa

<400> 2

Met Ala Thr Ala Ala Val Gln Val Ser Val Pro Ala Pro Val Gly Gln 1 5 10 15

Pro Asp Ile Gly Tyr Ala Pro Asp His Asp Lys Tyr Leu Ala Arg Val 20 25 30

Lys Arg Arg Glu Asn Glu Lys Leu Glu Ser Ser Leu Pro Pro Gly 35 40 45

Phe Pro Arg Arg Leu Asp Ser Asp Leu Val Trp Asp Gly Asn Thr Leu 50 55 60

Ala Glu Thr Tyr Asp Trp Thr Tyr Arg Leu Thr Glu Glu Ala Ile Asp 65 70 75 80

Glu Ile Glu Ala Ala Leu Arg His Phe Lys Ser Leu Asn Lys Pro Leu 85 90 95

Gly Tyr Ile Asn Gln Glu Thr Phe Pro Leu Pro Arg Leu His His Thr 100 105 110

Leu	Arg	Ser 115	Leu	Ser	His	Glu	Leu 120	His	His	Gly	His	Gly 125	Phe	Lys	Val
Leu	Arg 130	Gly	Leu	Pro	Val	Thr 135	Ser	His	Thr	Arg	Glu 140	Glu	Asn	Ile	Ile
Ile 145	Tyr	Ala	Gly	Val	Ser 150	Ser	His	Val	Ala	Pro 155	Ile	Arg	Gly	Arg	Gln 160
Asp	Asn	Gln	His	Asn 165	Gly	His	Pro	Ala	Asp 170	Val	Val	Leu	Ala	His 175	Ile
Lys	Asp	Leu	Ser 180	Thr	Thr	Val	Ser	Asp 185	Val	Ser	Lys	Ile	Gly 190	Ala	Pro
Ala	Tyr	Thr 195	Thr	Glu	Lys	Gln	Val 200	Phe	His	Thr	Asp	Ala 205	Gly	Asp	Ile
	210		Phe			215					220				_
225			Ser		230					235					240
_			Arg	245					250			_		255	_
_		_	Arg 260					265					270		
		275	Ala				280		-			285			
	290					295					300				
305			Asp		310					315					320
Asp	AIA	ьeu	His	325	ınr	ALA	GIU	туѕ	330	ALA	val	ATA	ьeu	335	rue rue

 $\hbox{Arg Gln Gly Asp Val Gln Phe Val Asn Asn Leu Ser Val Phe His Ser } \\$

340 345 350

Arg Ala Gly Phe Arg Asp Glu Gly Glu Lys Gln Arg His Leu Val Arg

360

355

Leu Trp Leu Arg Asp Pro Glu Asn Ala Trp Glu Thr Pro Glu Ala Leu 370 375 380 Lys Glu Arg Trp Glu Arg Val Tyr Gly Gly Val Ser Pro Glu Arg Glu 385 390 395 400 Val Phe Pro Leu Glu Pro Gln Ile Arg Ser Ala Ser Lys Gly Glu Ser 405 410 415 Val Gly Thr Gln Gly Gly Gly Tyr 420 425 <210> 3 <211> 35 <212> DNA <213> Artificial sequence <220> <223> Primer for amplifying tIle gene of gamma-butyrobetaine hydroxylase from Neurospora crassa <400> 3 35 atgaattcca tatgatggcc acggcagcgg ttcag <210> 4 <211> 31 <212> DNA <213> Artificial sequence <220> <223> Primer for amplifying tIle gene of gamma-butyrobetaine hydroxylase from Neurospora crassa <400> 4 attagtcgac tcaataccct ccccaccct g 31